

ABSTRACT

An aqueous resin composition with gas barrier properties contains (i) polyurethane resin having a urethane group and a urea group in a total concentration of 25 to 60% by weight and having an acid value of 5 to 100 mgKOH/g, (ii) a swelling inorganic layered compound (e.g., a water-swelling mica, and a montmorillonite), and (iii) a polyamine compound having an amine value of 100 to 1900 mgKOH/g. The polyurethane resin (i) is obtained by a reaction of (A) an aromatic, araliphatic or alicyclic polyisocyanate, (B) a polyhydroxyalkane carboxylic acid, and at least one component selected from (C) a C₂₋₈alkylene glycol and (D) a chain-extension agent (e.g., diamine, hydrazine and a hydrazine derivative), and neutralized with a neutralizing agent. The proportion of the acid group of the polyurethane resin (i) relative to the basic nitrogen atom of the polyamine compound (iii) is 10/1 to 1/5 as the equivalent ratio. A laminated film with high gas barrier properties is obtainable by coating a base film with the aqueous resin composition. The present invention provides an aqueous resin composition with excellent gas barrier properties, and a laminated film using the same.